

CLAIMS

What is claimed is:

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1. A method for exclusive caching in a computer system, comprising the steps of:
- reading a set of information from a storage system in the computer system;
- 10 storing the information in a host cache in the computer system;
- demoting the information from the host cache to a storage system cache in the storage system.
- 15 2. The method of claim 1, wherein the step of demoting comprises the steps of:
- evicting the information from the host cache;
- transferring the information to the storage system in a demote operation on a communication path between the host cache and the storage system.
- 20 3. The method of claim 2, wherein the step of transferring the information to the storage system in a demote operation is performed only if the information is not dirty and the step of transferring the information to the storage system in a write operation is performed otherwise.
- 25 4. The method of claim 2, further comprising the step of storing the information carried in the demote operation into the storage system cache.
- 30 5. The method of claim 4, wherein the step of storing the information carried in the demote

operation into the storage system cache comprises the steps of:

performing an eviction from the storage system cache;

5 discarding the information if the eviction fails.

6. The method of claim 5, wherein the step of performing an eviction from the storage system cache  
10 comprises the step of selecting a data block for eviction from the storage system cache from among a set of unshared data blocks in the storage system cache.

15 7. The method of claim 5, wherein the step of performing an eviction from the storage system cache comprises the step of selecting a data block for eviction from the storage system cache using a shared status of the data blocks as a factor in a  
20 replacement policy.

8. A computer system, comprising:

storage system having a storage media and a storage system cache;

25 host system having a host cache;

means for exclusively caching a set of information obtained from the storage media such that the information is stored either in the host cache or the storage system cache but not both caches at the  
30 same time.

9. The computer system of claim 8, wherein the means for exclusively caching includes means for

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system cache comprises means for selecting a data block for eviction from the storage system cache using a shared status of the data blocks as a factor in a replacement policy.

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16. The computer system of claim 8, wherein the storage system cache includes a sub-area for exclusive caching and sub-area holding other cached information.

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17. The computer system of claim 16, wherein the other cached information is obtained by performing read-ahead operations from the storage media.

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18. The computer system of claim 8, wherein the storage media is a disk array.

19. The computer system of claim 8, wherein the storage media is a tape.

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